

Insight from Catch Up & Read (CAR) intervention: What Best predicts students end of year reading fluency beyond the Starting point?

Jiabao Wen, Southern Methodist University
Theodora Beauchamp, Southern Methodist University



Introduction

- Early reading fluency is a critical foundation for later academic success.
- Catch Up & Read (CAR) provides structured interventions in grade 1-3 to support struggling readers.
- Understanding which factors best predict end-of-year (EOY) oral reading fluency can guide educators in tailoring instruction.
- Prior studies suggest initial fluency and progress-monitoring metrics (e.g., MAP growth) may service as strong indicator of later performance.

Objective

The objective of this exploratory study is to identify the possible predictors associated with reading growth for student grades 1-3 In CAR intervention program.

Methodology

- **Design**
 - Program evaluation framework to examine the effectiveness of CAR in improving reading performance.
- **Approach**
 - Longitudinal tracking of students' reading performance across Beginning-, Middle-, and End-of-Year checkpoints.
- **Sample:**
 - 536 elementary students at independent schools in DISD.
- **Variables**
 - DV: End-of-Year oral reading fluency
 - IV: Initial reading fluency, MAP growth metrics, middle-of-year reading fluency, and enrollment duration.

Analysis

Multiple Linear Regression (MLR)

- Goal: Identify predictors of End-of-Year oral reading fluency
- Key predictors tested: BOY fluency, MOY fluency, MAP growth, school enrollment

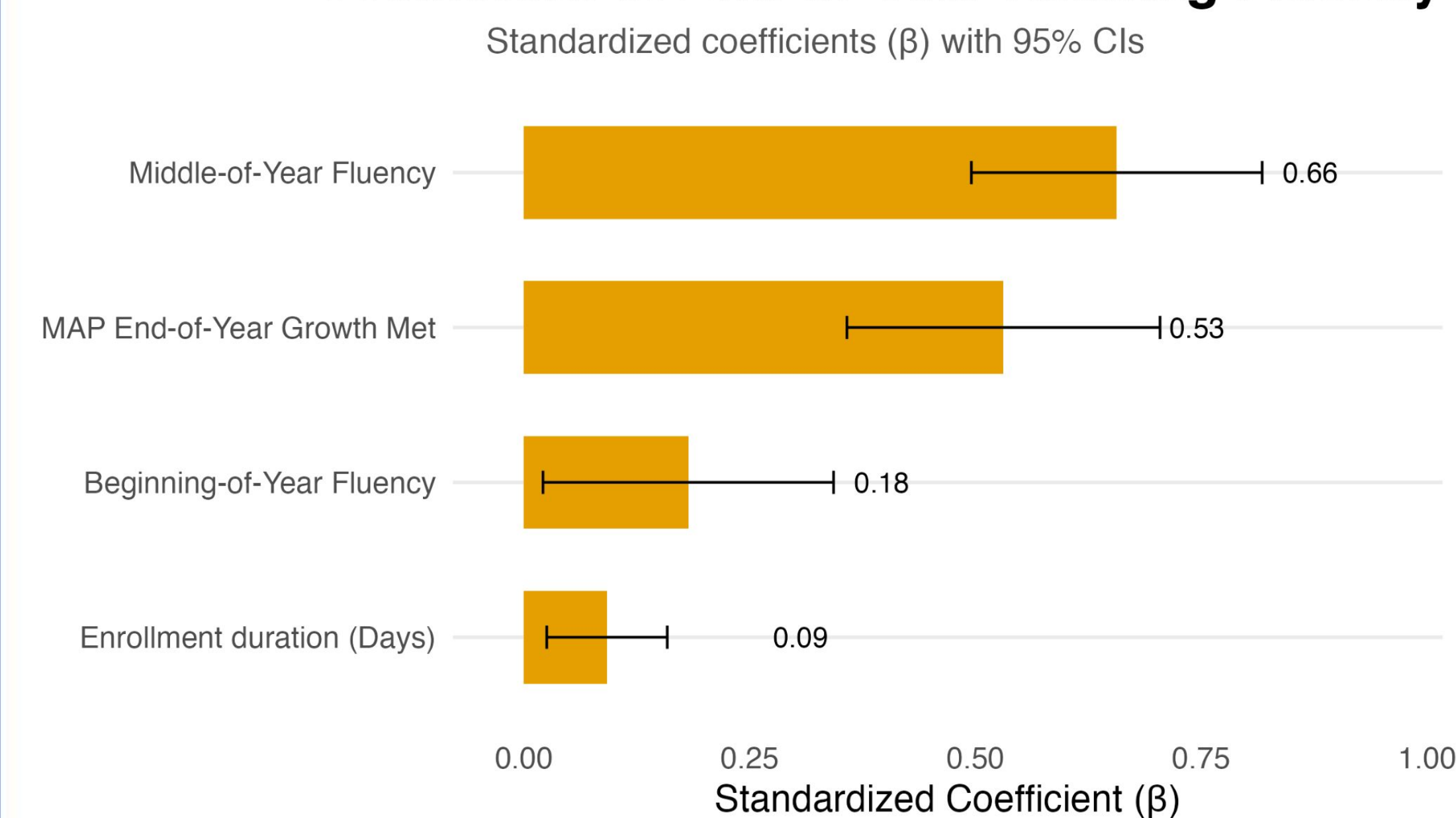
Dependent variable:	
END_OF_YEAR_ORAL_READING_FLUENCY	
BEGINNING_OF_YEAR_ORAL_READING_FLUENCY	0.235** (0.106)
MIDDLE_OF_YEAR_ORAL_READING_FLUENCY	0.675*** (0.084)
MAP_GROWTH_METYes	19.872*** (3.291)
DISD_ENROLLMENT	1.771*** (0.651)
Observations	217
R2	0.766
Adjusted R2	0.759
Residual Std. Error	18.375 (df = 210)
F Statistic	114.280*** (df = 6; 210)
Note:	*p<0.1; **p<0.05; ***p<0.01

Growth Mixture Modeling (GMM)

- Goal: Detect distinct growth trajectories across the student population.
- Four trajectory classes

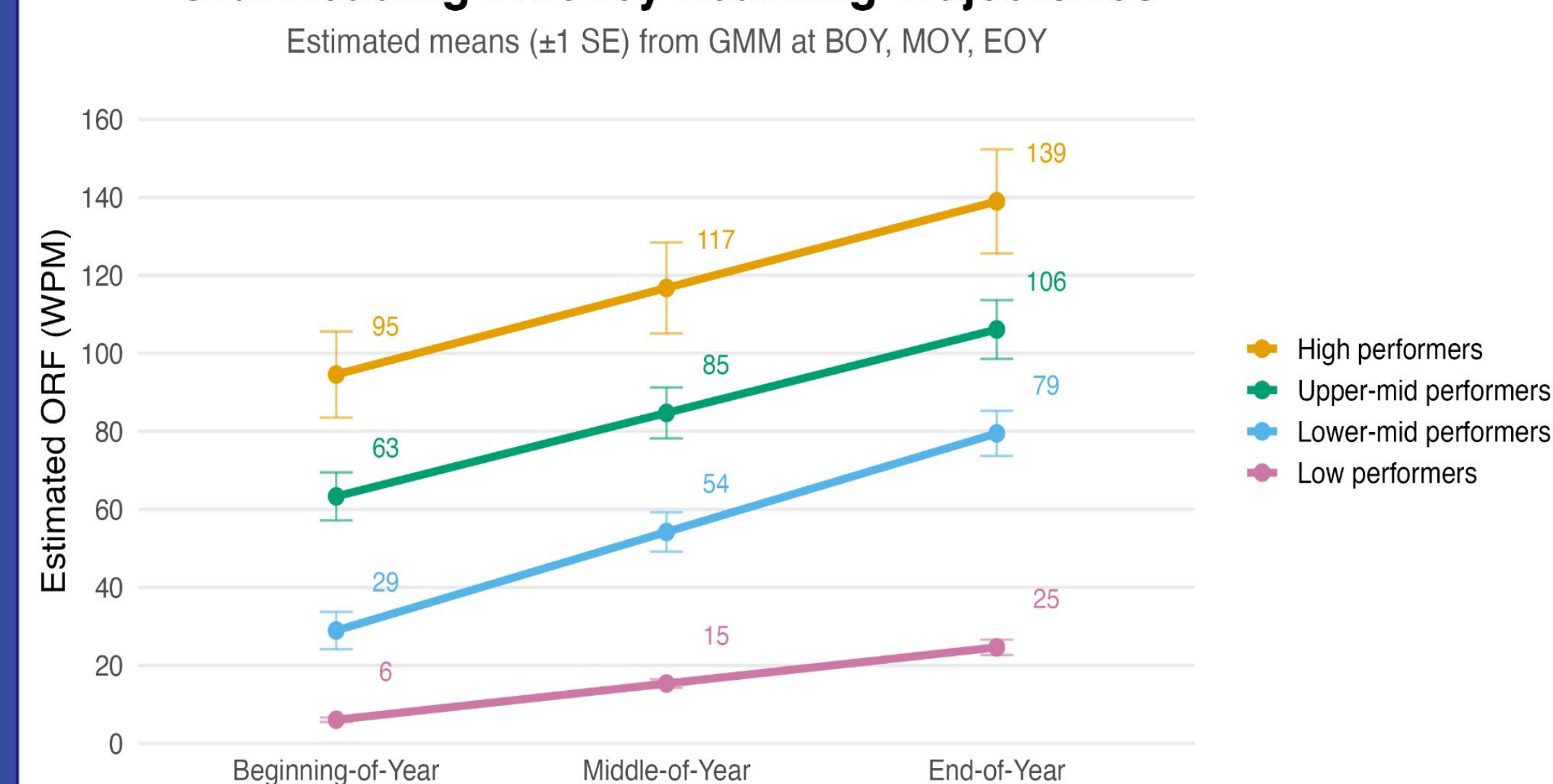
Results

Predictors of End-of-Year Reading Fluency



- MAP Growth Met = **Strongest predictor** of EOY performance
- MOY, BOY fluency, and enrollment duration are significant but weaker predictors

Oral Reading Fluency Learning Trajectories



- Four distinct learning patterns emerged were defined by GMMs based on three data points : *High performers, Upper-mid, Lower-mid, Low performers.*
- All groups showed growth, but **performance gaps persisted** from BOY → EOY.
- Visual: Learning trajectory plot (lines labeled High → Low)

Discussion

- CAR may need differentiated pathways to better serve lower-performing groups.
- CAR program students with low performance will need more time to progress in fluency.
- **Implications-** Teachers should use MOY fluency results to adjust instruction and provide timely supports.

Acknowledgements

Thank you to CAR for providing data. Thank you to Dr. Pando for providing the opportunity to research the CAR data and share our findings.